

## Avocados

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*Emeralda, Fla.*

Sometime during the year 1915, I ate my first Avocado, I saved the seed and planted it upside down, with the result that the roots started from the top and went down and the top curved like a fish hook and came up through the roots. Right here, I wish to say that I have done other things with the Avocado since then that have been about on a par with the first seed planting, and think that we all do things in Avocado culture that can be left undone after we have learned more by experience.

I make cypress boxes a foot long, a foot deep and six inches wide, fill them with rich dirt, plant one Mexican seed in the middle, where the tree is to stay until transplanted, and then to save watering and other work, plant seeds in the ends of the box, but transplant these seeds into other boxes as soon as they show the sprout coming out their tops. Sometimes the top will sprout with very little if any root; while on the other hand there may be no top showing, while the seed has a tap root a foot long. In most cases, the root is much longer than the top. A tree should do better if the Avocado seed is planted where you want the tree to remain.

When the seedling is between the thickness of a slate pencil and a lead pencil, I bud them with a bud that has a good fat eye, if a well filled out eye can be gotten. The shield bud is cut about an inch and a half long, with a thin sharp budding knife that is kept clean by using a clean rag on it once or twice while working on one bud. During the last two years, I have bought black diving caps and cut them into strips and wrapped the buds with them, leaving the eye exposed after using a good deal of caution in wrapping to keep water from getting in around the eye. If the rubber will last, I leave it on for six weeks, but new rubber must be put on if the first decays before the expiration of the six weeks.

After the first six weeks, I generally re-wrap, but not quite so tightly, and give the eye more room. I then take off a little of the tree top, and if the bud looks all right, keep pinching the top back now and then, until sprouts begin to start on the lower trunk. When you make your sprouts start your bud should do something also.

I have but little trouble getting my buds to live six, eight or ten weeks, but after that time trouble starts. For my own use, I use a box a foot long, so as to have plenty of room for roots. I have lost a great many Avocado trees bought in boxes that had but two or three inches for the roots from the trunk to the side of the box. After a tree has grown in this small box, the roots become rather cramped, and twisted, and in order to get a start of straight roots I sometimes think that after the box is removed at planting, one should take a sharp butcher knife and cut off two corners that are diagonally opposite. The best plan is to re-box into a larger cypress box and keep the tree until some roots start out into the new dirt.

Before I plant, I dig a hole three feet or more deep, and put stable manure into it, keeping the manure about a foot below where the bottom roots will be when the tree is set out. This manure should be put in the ground quite awhile before the tree is planted, so as to get through heating, though it does not appear to hurt the tree to plant soon after the hole is finished. Nothing but top soil should be put into the hole.

When planting over dirt and stable manure that has been put into a hole three or four feet deep, one must estimate how much the dirt will settle into the hole, and plant the tree high enough to keep it from sinking deeper than it was in the box. If one should dig a hole into clay or other stiff land and put loose dirt into it to plant in, a reservoir would collect and hold water that would kill the tree. After planting a tree, the ground around it must be kept moist all the time, but not wet.

Some people have advised planting Avocado trees deep enough to have the bud union at the surface of the ground. I have quit that practice because it appears to me now to be a bad thing to do even where the more hardy types are on the tropical root.

The Mexican root is to the Avocado tree what the sour root is to the orange tree. It is easier to get tropical Avocado seeds than Mexican seed, and they are ready to bud sooner and are much easier to bud than Mexican, according to my experience.

Now, while the waters are up, we are not likely to have cold weather that will kill the tropical part of the trunk that is under the hardy tree top. It may be as bad to warn planters against the tropical stock for Avocado trees as it is to warn them against lemon roots under orange trees; so I will not mention how poor a thing it is for one to do.

But, here comes an important point, and if you heed, you may save yourselves much time and cash. The idea that I wish to have you understand is that water kills avocado trees after they get large. I bedded up black land so as to get it four or five feet above water at the time, planted Mexican budded trees on it, and in three or four years had a good many of them twenty-five feet high. But the water came up on them and about the time they got to be ten or twelve inches through the trunk, there was not enough dry land to carry the tree. The favorite time for them to die quickly is when they are weakened by a big bloom. A small tree will stay alive under the same wet conditions. I have just lost fifty large bearing Mexican Avocado trees by water, where we had to dig holes for a year or more to get water out of the ditches that were nearer the lake than the trees were. I think that a tree should be planted on land four feet above the very highest water mark to be found in its neighborhood, and I also think that if you plant nearer water than that, you run great risks with chances nearly all against you.

Sour orange trees live in the same wet ground that kills my Avocado trees. We find that Avocado trees will grow well in thick banana clumps, with water not far from the surface, if the tree is not over four inches through the trunk. I have hedges of bearing orange trees in rows that are thirty feet apart and wherever I can get a space between the orange trees I plant an Avocado tree. I find that with my care the tree has no trouble getting above the tops of the orange trees, because the Avocado tree roots will mingle with orange roots, without one hurting the other, providing there is moisture enough for the Avocados. To get the best results from the Avocado tree, it must have more water during our dry times than the orange tree requires. We plant Mexican Avocados at Emeraldalda, Lake County, on the Ocklawaha River three quarters of a mile from the south

line of Marion County, and if it had not been for our continued high water we would have had a fine grove of trees, about thirty feet high. About three years ago, I could have told you much about the merits of Mexican Avocados, but now I don't think that I know a great deal about them, but appear to have settled down to the Harman, Gottfried, and Puebla varieties, and am not now sure of the bearing qualities of the Gottfried and the Puebla. We know of no finer fruit than the Gottfried. The Fuerte is said to be a hybrid resulting from a cross between the Mexican and the Guatemalan types and its fruit is also rich and great, but in my location, near the river swamp, the fungus makes decayed spots on its fruit, and many fruits are spoiled.

The Fuerte fruit, or some variation of it, is the Avocado that Lake County and the other parts of Florida, in the same latitude, will eventually raise in great quantities.

I have planted a hundred Fuerte seedlings at Yalaha, Lake County, to see if I can get a good fruit with a good skin for our neighborhood. We also expect to plant some in hedge form along a fence.

On the southeast sides of the four large lakes, in Lake County, the Guatemalan types of Avocado can be raised, and as that is the commercial one, the people in those localities will soon wake up to its great possibilities, when budded on Guatemalan or Mexican roots.

The new growth on Mexican Avocado trees will stand a little more cold than the new growth on the orange tree that grows by its side.

When you have only a few Avocado trees that you want to start in the cool part of Florida, it is best to shade them on top, and on both the east and west sides, leaving the north and south sides open, so that the cold northwest winds can sweep through^ and hit the tree, to prevent frost forming on the tree. Frost above freezing will hurt a tree more than freezing without frost, but when it gets a good deal below freezing and the Avocado tree has a heavy coat of frost on it, the leaves of even a Mexican get hurt some.

When an Avocado tree is shaded, the node lengths will be much longer, and that will make the tree higher. When it is grown in full sun the joints are shortened, so as to keep the leaves close along the trunk, to prevent the sun burning the tree.

At Yalaha on the southeast side of Lake Harris, we have a small planting of a number of Guatemalan varieties, and some day it will be found which varieties will do the better on that piece of land.

It appears from what we hear that one variety of Avocados will do well around Homestead and be a poor variety in another part of the state or on a different kind of soil.

The Nimlioh buds take so well on Mexican, and the trees do so well and make such symmetrical tops, like Popeno's photograph of the parent tree, that I can't give it up till I try it out on my own land.

Our record of our first Mexican fruit, in 1921, is:

*San Sebastian*—First fruit ripe June 20th; the last fruit taken from the tree July 30th; 27 good ones and 2 spotted.

*Harman*—First fruit ripe June 29th; last ripe Sept. 12th; 79 fine and 27 spotted.

*Northrop*—First fruit ripe July 4th; last Sept. 4th; 60 good, no spotted.

*Gottfried*—First fruit ripe Aug. nth; last Sept. 18th; 32 good, 2 specked.

The Gottfried fruit weighed from 8 ounces to 15 3/4 ounces.

The above varieties of fruit were on trees that we planted about two years before gathering the fruit.

The Mexican fruit cracks and gets rotten specks on them to some extent. By picking the fruit at the right stage, just before ripening, the splitting can be prevented.

Our experience leads us to hope that the experiment station at Eustis will raise seed from Fuerte and other Mexican-Guatemala Hybrid varieties, that are grown in with Mexican varieties, like Harman and Puebla, and do something with the seed to help find the Avocado for Lake County and its surrounding counties.